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ABSTRACT

One of the most persistent dilemmas faced by practicing educational administrators is choosing an appropriate model for decision making. This paper presents findings of a study that investigated the appropriateness of Cohen, March, and Olsen's (1972) Garbage Can Model of decision making. The case study examined the decision-making behavior of the Council of Wesley College, Perth, the governing body of an Australian private school. Data were collected through participant observation of Council meetings for 1 year, the content analysis of the meetings' minutes, and interviews with the members of the governing body. Findings indicate that the Garbage Can Model provided a suitable framework for observing and describing the council's decision-making behavior. The decision-making process was unclear and fluid, and resolution was the most frequently adopted decision style. However, about one-fourth of the decisions were made by flight or oversight. The adoption of flight or oversight decision styles reflected a desire for more information and discussion, after which resolution was achieved. The Council left few problems unresolved, but took a relatively long time to make decisions. Both the Council chairman and the principal influenced the decision-making process; however, other individual members with valued expertise also had an impact. Representatives of interest groups did not exert significant influence. (Contains 164 references.) (LMI)

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PERSISTENT DILEMMAS IN ADMINISTRATIVE PREPARATION AND PRACTICE

TITLE OF PAPER :

RATIONAL OR ANARCHIC :

*The dilemma of choosing a model describing administrative decision
making behaviour*

By

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RATIONAL OR ANARCHIC :

The dilemma of choosing a model for administrative decision making behaviour

ABSTRACT

One of the most persistent dilemmas confronting practising educational administrators is the difficulty of choosing an appropriate model for their decision making behaviour.

Models borrowed from economic theory have been found to be deficient in their capacity to describe decision making behaviour as it is observed in educational contexts.

This paper is based on an exploratory study (Kefford, 1990), which investigated the appropriateness of Cohen, March and Olsen's (1972) Garbage Can Model of decision making as a description of the decision making behaviour of the governing body of an Australian private school. In particular, the study sought to understand how the governing body makes decisions; in what areas it makes decisions; whether it makes different kinds of decisions in relation to different areas; and who exerts influence on the decision making process.

An observational case study showed that the garbage can model provided a suitable framework for observing and describing characteristics of the governing body's decision making behaviour. In the terminology of the garbage can model, the governing body has ambiguous goals and problematic preferences. The technology of the decision making process is unclear to its members, and their participation in the process of decision making is fluid. Resolution was the most common decision style adopted by the governing body, though about a quarter of all their decisions were made by flight or oversight.

Frequently, decisions made by flight or oversight were important decisions for the governing body, and its adoption of flight and oversight decision styles reflected a desire for more information, and more opportunity for formal and informal discussion of the issues, after which resolution on the matters under discussion was achieved. The decision making performance of the governing body featured a relatively low number of unresolved problems, but a relatively long time taken to make decisions.

Both the governing body chairman and the Principal, the professional administrator, influenced the decision making process, but so too did other individual members whose expertise was valued. Representatives of interest groups on the governing body were not found to exert significant influence, however.

For practising administrators, the study offers a possible resolution to the dilemma of choosing a decision making model for their own organisations.

INTRODUCTION

THE RISE AND RISE OF THE ECONOMIC RATIONALISTS

For the greater part of the past decade, schools and school systems throughout the western world have been subjected to close scrutiny and analysis by economic rationalists as recession-hit governments have seen fit to reexamine every aspect of their social policies to determine the quantifiable benefit derived from the expenditure of every dollar or pound.

A related policy thrust in Australia has focused on the relationship between the outcomes of schooling and the needs of the Australian economy in the increasingly competitive world trade environment of the 1980's, demanding that schools produce young people with the basic skills and competencies necessary for a competitively productive workforce. Elmore (1990, 1-2) says in order to sustain our present standard of living and regain our competitive position in the world economy ... we will need a better educated workforce, which will in turn mean that schools will have to improve dramatically the way they educate all children.

As a result, governments have established structures and procedures to render schools accountable for their students' academic performance ranging from the emergence of centrally controlled and determined national curricula and their associated outcome statements; through the imposition of system-wide monitoring of standards and student attainments in basic subject and skill areas, such as literacy and numeracy, to produce performance profiles on individual students at various age levels; to rigorous financial controls being placed on educational expenditure in the name of quality assurance. The emphasis, in short, has been placed upon determination of measurable outcomes for educational processes, so that, at the margin, expenditure of each additional education dollar is able to be justified in terms of a corresponding increase in quantifiable educational outcomes as measured in improved student performance.

Yet this recent experience of educational administrators and policy makers in the Western world has taken place without any significant questioning as to whether the economic rationalist's model of decision making regarding resource allocation is appropriate for educational contexts. Of course we hear and understand the economic rationalist's argument. All of us have learned to be frugal and careful managers in the face of recessionary times and shrinking school and system budgets. Yet all of us are haunted by the perception that there is something flawed about basing all of our decision making on the economic rationalist's model. Our real-life experience of schools and school systems is that little occurs that is rational or predictable. For more than twenty years studies have depicted schools as organisations with ambivalent, conflicting and multiple goals and unclear technology, which makes the link between process and outcome uncertain and problematic (Dimmock, 1993 : p 2). Faced with the complexities of linking teaching with learning and student outcomes, schools have reacted by establishing strong structures and rules to bolster the infrastructure supporting the core technology. Elmore (1990; 8) notes, however, that powerful structural and cultural forces in schools have combined to reinforce a very narrow model of teaching and learning, and classroom activity for the average student is disconnected from what happens in other classrooms and the wider community. Moreover, the organisation and management of a school is inevitably hierarchical and bureaucratic, with the result that senior management is often decoupled from the instructional core, and Dimmock (1993, p 2) suggests that these patterns of management and organisation in schools may in fact obstruct the attainment of

the outcomes for which the economic rationalists are demanding greater accountability (Sizer, 1984, p 205; Chubb, 1988, p 29).

Our recent experience and the observations we have based on them highlights one of the most persistent dilemmas that we and our professional colleagues have faced, and that is the dilemma of choosing an appropriate model which would inform and illuminate our decision making, whether we are school-level administrators or system administrators, principals or superintendents. How should we respond to the strident demands of the economic rationalists - are we satisfied that their model best informs and illuminates our decision making? At the margin, are we satisfied that the expenditure of each additional dollar produces superior measurable outcomes in the programmes and curricula over which we preside? Or is it our considered view that the interests of our students would be better served by our applying a model of decision making which reflects the world as we know it, in which the school is an organisation whose goals are ambiguous, whose technology is unclear and ill-defined, and in whose processes the participation of individuals is fluid?

WHAT DO WE WANT OF A MODEL OF DECISION MAKING ?

Our decision making as educational leaders takes place in a context characterised by ambiguity, conflicting interests, limited information, and uncertainty (Estler, 1988, p 316; Sharman, 1984; Zeleny, 1982, p 1; Sharples, 1975, p 55). These ambiguities cannot be eliminated, Estler (1988, p 316) says, but they can be made more understandable by exposing administrators to insights offered by research into decision making, and to models of decision making which provide useful knowledge (Estler, 1988, p 306; Fuller, Wood, Rapoport and Dornbusch, 1982, p 7; Heck et al., 1989, p 266). Any educational system contains a wealth of detail which is inexhaustible, and the construction of any model involves simplifying the detail through abstraction and deliberate selection of essential features considered to be important (Johnstone, 1974; Carley, 1980, p 11; Armitage, Smith and Alpel 1969, p 1). Models of educational decision making in particular need to be able to explain observed reality (Estler, 1988, p 306), and Ryan (1985, p 57) points out that even if it does not cover every situation, an appropriately derived model is an ordering device, enabling administrators to use existing analyses in a consistent and comprehensive way to provide insights (Glasman and Nevo, 1988, p 141) and assist understanding. Armitage et al. (1969, p 4) stress the importance of the adequacy of the model to describe the past and to predict a description of the future.

Rational models of how choices are made by individuals and organisations have proven attractive (March, 1972, p 413) to the extent that they have dominated theories of organisations (Pfeffer, 1982, p 5, p 72; Metz, 1984, p 1), especially commercial organisations. Despite this dominance of the rational model, however, recent research has discerned a need for models which are able to come to terms with the less than rational aspects of organisational decision making behaviour observed in some organisations (March and Olsen, 1979, p 10). Significantly, Howell (1985, p 5) argues that there are greater complexities in the management of educational institutions than there are in commercial enterprises, both because of the more numerous links of responsibility the school encounters, and of the number of "publics" to which a school relates. Beare (1989, p 176) agrees, suggesting that the school is much more complicated than any other business, because its purposes are more complex, more public, and more politically sensitive. Moreover, a body responsible for educational decision making

is not exactly like the board of a manufacturing company or business concern, in McKeown's (1981) view, because of the difference in the "product" of the organisation. Secombe (1986, p 18) points out that unlike most businesses, schools have a product which is intangible and imprecise in its nature. While a business can use its net profits as a measure of its effectiveness, schools find it hard to measure their product, because of the ongoing nature of the education process. Abrahamson (1988, p 46) suggests that the intangible product is the very subtle matter of an influence, involving not making money or winning cases, but rather upholding and imparting values, transmitting knowledge and skills, and preserving civilisation.

Yeakey cautions that schools should not be studied as though they were anything other than schools (Yeakey, 1987, p 28), and the perceived inadequacy of the rational model to describe and explain organisational behaviour in an educational context has led to the development of what Estler (1988, p 311) calls the post-rational perspective, which describes behaviour in organisations which do not appear to have the qualities of rational organisations (Estler, 1988, p 306).

RESOLVING THE DILEMMA : Research on decision making

As a first step towards resolving the persistent dilemma for educational administrators of choosing an appropriate model for their educational decision making, this paper draws upon the findings of an exploratory study which sought to evaluate the usefulness of a particular post-rational model in describing the educational decision making process as it was observed in the governing body of an Australian private school.

Research on educational decision making prior to the mid-1960s limited its analysis to the internal operation of the school, focusing on efficiency and the effectiveness of student outcomes (Iannacone and Cistone, 1974, p 65; Cistone, 1982, p 1638). More recent research has been influenced by open-systems perspectives, though it is important to note the inventory of what Cistone (1982, p 1639) calls theory-based research is small. There is not much information available about decision making in American private schools (Erickson, 1983; Scott and Meyer, 1985) or individual government schools (Miles, 1982). Iannacone and Cistone (1974), Zeigler (1975), Cistone (1982, p 1642) and the Institute for Educational Leadership (1986, p vi) note that research is also too restricted in its scope and too weak in its methods to make a significant contribution to understanding how a school board operates. Similarly a lack of data on decision making in Australian private schools is noted by Radford (1953, p v), Hansen (1971, p 93); Richards (1983, p 46), Wiedenman (1988, p 212) and Hansen and Hansen (1989, p 203). Iannacone and Cistone (1974, p 65) suggest that case studies would offer useful help to a field already rich in narrative, but need to be set within theoretical frameworks. Willower (1987) also calls for more frequent application of theoretical models in educational administration.

The relative paucity of research-based data on educational decision making has been a handicap to Australian research, though Chapman (1984, p 49) suggests that there are, at least implicitly, sufficient similarities between the educational decision making context in North America, for example, and an Australian private school governing body to provide useful bases for comparison, and while direct comparison of the American data with the decision making process in the governing body of an independent school may not be possible, previous studies of decision making in educational institutions at least provide some indication of the areas in which School Boards and Councils make decisions.

In his review essay on the governance of schools for *The Encyclopaedia of Educational Research*, Mitchell (1982, p 731) defines the task of school governing body members as policy-making, objective-setting and the exercise of authority in management and administrative functions to the extent that they relate to the execution of policy. Cistone (1982, p 1637) explains that the 16000 School Boards in America have responsibility for and control over education under state law, and they implement the mandate of the state (Jones, 1983), formulating wise educational policy in response to the will of the people (Smith, 1982). The Institute for Educational Leadership (1986, pp 20-21) found that American School Boards regard their most important areas of responsibility as providing financial support for the school system and allocation of resources, followed by definition of student needs and appraisal of curriculum. The Institute's findings are supported by a number of studies (Savard, 1971, p 41; Goldhammer, 1971, p 59; Nolte, 1978; Kimpston and Andersen, 1982; Nelson and Crum, 1983; Cameron, 1988).

Holmes (1981) and Gronn (1984, p 66) list the responsibilities of Australian government school councils, which appear to be similar to those of a school site advisory committee in America (Kirst, 1980; Tubbs and Beane, 1982; March and Miklos, 1983, p 8; Turnbull, 1985), as advising on the determination of curriculum, financial management, the selection of staff, and the management of school buildings.

Reporting the findings of studies of independent schools in England, Snow (1959, pp 126-7) and Wakeford (1969, p 108) identify the main responsibilities of governing bodies as the selection of the Principal, and management of the school's financial, property and kindred affairs. Presenting an American perspective, Baird (1977, p 74) and Barger (1972) concluded that independent school governing bodies there are perceived to have the legal power and duty to select the school Principal, to review and approve budgets, and to oversee the general operations of the school. Springer (1967, pp 1-2) similarly indicates that school governing bodies in America have the responsibility to ensure the continued existence and future of the school; to select the Principal; to set institutional policy; and to manage the school's financial and physical resources.

Histories of Australian independent schools indicate that in their foundation, a similar role was envisaged for their governing bodies (Johnstone, 1932, pp 132-137; Holme, 1951, p 25; Child, 1968, p 23; Braga, 1978, p 155; Hansen, 1971, p 94). Ritchie (1981, p 27), Roff (1989, p 21) and Delves (1973, pp 40-41) assert that a school governing body has three areas of responsibility: ownership; overall policy; and the selection of the principal (Dyer, 1977, p 4; Darling, 1978, p 108; Woodward 1987). Richards (1983, p 48) and Woodward (1987, p 7) regard their responsibilities in financial management as being the most important continuing function of the governing body.

Having identified the broad areas in which educational decision makers make decisions, this paper now turns to examine theoretical models of educational decision making. The next section shows how limitations in the capacity of the classical rational model to come to terms with the ambiguities in educational decision making led Cohen et al. (1972) to formulate their conceptualisation of educational organisations as organised anarchies. The model of decision making specifically derived for an organised anarchy, the garbage can model, is applied to describe the process of educational decision making as it was observed in the governing body of an Australian independent school, and it is the account of that description that provides a basis for resolving the dilemma of finding a model of decision making for educational contexts which actually works.

MODELS OF EDUCATIONAL DECISION MAKING

Various models have been derived from theories of decision making (March 1972, p 413), and Olsen (1979, p 82) describes the characteristics of the two contrasting models of choice in complex organisations which are the focus of this paper and which may be applied to decision making in educational organisations : the rational (entrepreneurial) models, and artifactual (non-decision) models.

The Rational Model of Decision Making

The rational model of decision making was evolved as a representation of an individual making decisions in the context of classical economic theory. The individual consumer, or entrepreneur, is assumed to be operating in the economic world as a rational being, and so makes decisions to purchase goods and services, or to produce goods and services, in such a way that would minimise costs and maximise profits. In other words, the entrepreneur is presumed to maximise the utility of the decision.

Rationality suggests that behaviour reflects purpose or intention (Allison, 1971, p 13), and is goal directed : people have predetermined goals, and the alternative which is most attractive in terms of the goal is chosen (March, 1989, p 253), emphasising the intellectual aspects of decision making in the linking of means to ends. It assumes people know what they want, and have the knowledge and power to get it (Simon, 1979, p 500). Sowden (1984, p 178) shows that it is irrational for any individual to adopt a strategy which does not maximise his utility relative to some other strategy, and hence an individual chooses rationally when he chooses to maximise the expected utility of all the available choices in the situation (Slovic, Kunreuther and White, 1974, p 188; Raiffa, 1968; Thornton and Tanner, 1976; Alo, 1987; Moore and Thomas, 1988). Even in situations characterised by uncertainty, decision makers are presumed to act rationally, setting out objective goals, identifying the alternative means of achieving those goals, and calculating the alternative which will yield the maximum expected utility (March, 1982, p 91). Hutchel and Moles (1986, p 180) underline the value of rational decision theory : it provides a decision maker with a tool which prescribes a way of selecting the best action to be taken.

The rational model in an organisational setting

Olsen (1979, p 85) suggests that at an organisational level, the rational model might be applied in situations in which relatively few organisational members participate in making the decision, and where the definition of organisational values, beliefs and procedures is stable and not too complex. To a decision maker in these organisational circumstances, Hutchel and Moles (1986, p 180) indicate that the rational model is of value because it enables the specification of a number of feasible actions, a set of outcome criteria, and a set of contextual constraints.

Hoy and Miskel (1982, p 264) see no need to distinguish individual from organisational decision making, and in the organisational context, it is assumed that human decision makers will act rationally, always choosing that alternative which yields them the greatest benefit, or the one which enables them to optimise their choice. The task of deciding pervades the entire administrative organisation,

and the decision making process occurs in substantially the same generalised form in most complex organisations (Hoy and Miskel, 1982, p 268).

Bounded rationality

A good deal of debate and empirical research has centred on the question of whether the rational model of decision making represents decision making behaviour in all organisational contexts, however (Estler, 1988, p 308). Research has tended to show that decision making is habitual, intuitive or instinctive, involving neither a search for alternatives nor deliberation (Warneryd, 1986). Research has also revealed some startling limitations in the ability of decision makers to think in probabilistic terms and to bring relevant information to bear on their judgments. Moreover, maximisation of expected utility does not always describe either the goals which motivate actual decision makers nor the actual processes they employ when making decisions in organisational contexts.

Application of the rational model assumes that rational decision makers wish to select an action which is logically consistent with their basic preferences for outcomes and their feelings about the likelihoods of the events upon which these outcomes depend. Given this assumption, the practical problem becomes one of listing the alternatives and scaling their subjective values of outcomes and their likelihoods so that subjective expected utility can be calculated for each alternative. Another problem arises from the fact that the range of theoretically possible alternatives among which the decision maker has to choose is often quite large. As March (1984, p 92) points out, there are limitations on the number of alternatives which can be considered, and limits on the amount and accuracy of the information that is available. March (1978a, p 589) also notes that alternative viewpoints of decision making under uncertainty have identified a number of ways in which the rational model is neither descriptive of behaviour nor a good guide to choice situations.

Forrester (1984) suggests that complex decision making situations require considerable extension beyond the mere concept of rationality. Problem definition becomes plural and multiple, and consequently, pure rational models are problematic when it comes to predicting behaviour (March, 1978a, p 588). Forrester (1984) indicates that the best hope for the rational model of decision making is that it be used not so much to predict what will happen *if*, but rather to assist decision makers to simplify their worlds, to suggest what it is most important to attend to, and what can be neglected. Perhaps all the theorist can hope for is that he can specify a sensible process (March, 1978a, p 590), rather than predict a sensible outcome.

The realisation that the rational model appeared to be insensitive to the cognitive limitations possessed by individuals and organisations led to the emergence of theories of rational choice stressing the *boundedly rational* nature of decision making (Pfeffer, 1982, p 6; Olsen, 1979, p 82). As an alternative to the maximisation hypothesis, Simon (1956, p 129) introduced the theory of bounded rationality, which asserts that the cognitive limitations of the decision maker force him to construct a simplified model of the world in order to deal with it (Prescott, 1978, p 492). Simon still regarded human decision makers as being rational, but they were rational only in dealing with their representations of the world, and not with an objective portrayal of the full complexity of the task environment itself (Shulman and Carey, 1984, p 502).

March and Simon (1958, pp 140-1) state that most human decision making, whether individual or organisational, is not truly rational in the sense of being directed towards the selection of the best possible alternative. Rather is it

concerned with the discovery and selection of *satisfactory* alternatives : only in the most exceptional circumstances is it concerned with *optimal* alternatives. To *optimise*, they said, requires processes several orders of magnitude more complex than those required to *satisfice* . Their example was the difference between searching the haystack to find the sharpest needle, and searching it to find a needle sharp enough to sew with. This was the key principle of the alternative to rational decision making, the notion of *satisficing* (Simon, 1959, p 273), whereby an organism strives to attain some satisfactory, though not necessarily maximal, level of achievement (Lancaster and Lancaster, 1982, p 24). Organisms adapt well enough to *satisfice*; they do not in general *optimise* (Simon, 1956, p 129). Administrative behaviour, in Simon's (1957a, p xxiv) view, is peculiarly the behaviour of human beings who *satisfice* because they do not have the wits to *maximise* (March, 1978a, p 590).

Limitations of the rational models

The applicability of the rational model is limited, because although it is the most expansive in viewing the purpose of administration as decision making, it provides the narrowest view of decision making in the specific variables it defines (Estler, 1988, p 308). Zeleny (1982, p 1) cautions that it is really nothing more than a simplifying assumption of economic theory, and is not a useful guideline even as to how business really operates. Problems requiring decisions in business are more complex than economic theory indicates, because improvement with respect to one objective is only achieved at the expense of another. Zeleny (1982, p 64) also argues that *satisficing* is not a major guiding principle of human decision making because the idealised notion of rationality on which it is based assumes maximisation of a fixed or relatively stable objective, a known set of alternatives and a skill in computation which allows one to reach the highest attainable point in respect to the objective. The reality is that objectives are not static; information is seldom perfect, and alternatives, along with human cognition, are incomplete and limited. Zeleny (1982, p 64) accepts Simon's view that an ideal objective rationality is therefore unobtainable, and that the capacity of the human mind to formulate and solve complex problems is inadequate with respect to objectively defined rational behaviour.

The limitation of inconsistent preferences

The rational model, because of the research it has generated and its apparent potential applicability (Etzioni, 1967, p 385; Pfeffer, 1982, p 72), nonetheless has intuitive appeal to those who see organisations as behaving in accordance with definable laws and predictable patterns. In an organisational setting, however, both the rational model and the theory of bounded rationality, require assumptions regarding the rational action of an individual decision maker which further limit their applicability to decision situations in organisations. The assumption in the rational model that behaviour in situations requiring decisions is intentional and foresightful, for example, does not fit the reality of the inconsistent and ill-defined objectives which confront many organisations. Many organisations do not have a specific agreed upon set of values that could provide criteria for evaluating alternatives, and human decision makers cannot know nor process all the information involved in all the possible alternative consequences of their actions (March, 1984, p 91). The rationalistic assumption that values and facts, means and ends can be clearly distinguished is therefore inapplicable (Etzioni, 1967, p 386). Moreover, it is often impossible to specify a preference function for

an organisation that satisfies the requirement in the rational model of consistency in preferences (March and Olsen, 1979, p 12), because human preferences rarely appear absolute, stable, consistent and unaffected by the choices they control (Pfeffer, 1982, p 234; March, 1984, p 91).

The limitation of hypothetical constructs

The emphasis in the rational model on decision making based on information processing explanations for behaviour, in which hypothetical constructs like goals and preferences play an important part also shows a lack of understanding of what actually occurs in decision making in organisations. Connections between organisational actions and their consequences are hard to see : to base explanations of those connections on hypothetical constructs which are inferred, not observed, and impossible to measure, poses epistemological difficulties which are enormous (Pfeffer, 1982, p 75). One particular problem Pfeffer (1982, p 71) highlights is the difficulty of distinguishing between the effects predicted by the rational models, and chance.

The limitation of the ambiguity of history

The rational model is also unable to deal with the ambiguity of history. March and Olsen (1979, p 12) stress that the causal world for many organisations is obscure, and what happened, why it happened, and whether it had to happen, are all problematic. March (1984, p 95) argues that theories of choice underestimate the confusion and complexity surrounding actual decision making. Decision making ordinarily presumes an ordering of the confusions of life. The classic ideas of order in organisations involve two related concepts : that events and activities can be arranged in chains of ends and means; and that organisations are hierarchies in which higher levels control lower levels and policies control implementation. March (1984, p 95) argues that observations of actual organisations present a more confusing picture. He suggests that the disorderliness of many things observed in decision making has led to the conclusion that there is very little order to it. Limits on co-ordination, attention and control are inherent restrictions on the implementation of rationality in organisational action (March, 1989, p 180).

The limitation of the ambiguity of the organisational context

The rational model also ignores the ambiguity of the organisational context itself (Pfeffer (1982, p 79). Moreover, it is doubtful that the rational model posited for the individual decision maker transfers to more than one decision maker making decisions on behalf of an organisation. Pfeffer (1982, p 79) raises the question as to whether theories that begin by building up from the level of individual rational cognitions can ever hope to explain the aggregation of behaviour that occurs in large social systems. Organisations are collective entities involving collective action. Olsen (1979, p 82) notes that the organisation is simply assumed under the rational model to involve one decision maker - presumably the entrepreneur or the manager of the idealised small firm on which the theory is based. March and Olsen (1979, p 12) highlight the unpredictable participation by individual organisation members in decision making, and observe that the connection between individual action and organisational action is sometimes quite loose (March and Olsen, 1979, p 16).

The limitation of the rational model in educational contexts

The rational model, then, does not deal effectively with multiple and ambiguous goals, with multiple interests and participants, with scarce or inaccessible information, nor with quirks of human nature, all of which are often observed in reality (Estler, 1988, p 308). In educational contexts too, rational models have been found to offer an inadequate account of decision making. Hanushek (1981) notes that there is no set of reliably identifiable factors which affects student performance in a consistent way, and Sergiovanni (1985, p 359) suggests that in the real world, no sequential assumptions are made about the relationships among discrete goals, curriculum, teaching and outcomes. Hanushek (1981) notes this lack of a coherent model of the educational system which would allow the application of economic theory to questions of education policy, and Harrold (1989, p 146) asserts that economic theory and analysis, which evolved from the study of the market-oriented processes of production of inanimate objects, cannot easily cope with the complexities of non-market production of changes in the knowledge, attitudes and behaviour of human beings. Dill (1964) points out that concepts derived from commercial applications are not readily transferable to schools because they do not address the inherent ambiguities in the mission of schools, and Balldridge et al. (1978) similarly conclude that business models do not fit schools very well. As Thomas (1988, p 2) observes, the school is a particular and peculiar member of contemporary organisational society.

These limitations in the capacity of rational models of decision making to represent and explain aspects of decision making in educational organisations have ensured continuing interest in the development of other models of educational decision making. The trend has been away from normative applications of models designed to tell decision makers what they should do, to the development of descriptive models which focus more on explaining and predicting the realities of educational decision making (Estler, 1988, p 306).

Observations of organisational behaviour which were inexplicable in terms of the rational model led to an examination of properties of less rationalised structures and led March (1974, p 25) to conclude that an alternative theory of organisational decision making is necessary. In a decision context that departs significantly from the traditional notions of technical rationality - a context characterised by ambiguity, complexity, uncertainty, instability and uniqueness - Duignan (1987a, p 209) argues for a more coherent and holistic framework based on a different set of assumptions about the nature of organisations and of organisational behaviour. He seeks a perspective on decision making in organisations which firstly takes into account readily observable characteristics of organisations and their behaviour, and which then develops a model of decision making which is consistent with that view of organisations.

The recognition that organisational decision making involves a process having many effects unrelated to outcomes is reflected in a body of literature which Estler (1988, p 311) labels post-rational, and which appears to offer a description of decision making in educational organisations able to take account of a range of factors with which other models deal less successfully. The post-rational models of decision making derived from this thinking Olsen (1979, p 83) calls artifactual, and it is to post-rational perspectives on organisational decision making to which this paper now turns.

THE POST RATIONAL VIEW - A Reaction to Rationality

The most important difference between artifactual models and the rational models previously mentioned is that events are not the realisation of individual purposes (Olsen, 1979, p 83). Rational decision models view the organisation mainly as a vehicle for production of decisions, but while organisations may be vehicles for solving well defined problems, the basic premises of the artifactual model see organisations as sets of procedures through which participants arrive at an interpretation of what they are doing and what they have done in the process. In the artifactual model, the automatic and unconscious aspects are dominant. The outcome is seen as an unintended product of certain processes having dynamics of their own. A decision in these models is a *post-factum* construct produced by participants or onlookers. Events occur, and if they are afterwards described in a systematic fashion as decisions, that expresses more man's ability to describe post-factum theories of his own behaviour than his ability to make goal-oriented decisions through established structures and processes (Olsen, 1979, p 83). The evolution of artifactual models of decision making can thus be seen as a response to the perceived inability of the rational model adequately to describe aspects of observed organisational behaviour (Estler, 1988, p 306; Pfeffer, 1982, p 63).

Corwin (1974) refers to the accumulating evidence that organisational behaviour does not conform to the rational model (e.g., Katz, 1964; Bidwell, 1965; Dreeben, 1973; Lortie, 1975). Weick (1976, p 1) notes that people in organisations are hard pressed to find either actual instances of rational practices whose outcomes have been as beneficial as predicted, or rational explanations for much of what goes on within organisations. March and Olsen (1979, p 54) state that there is no longer general acceptance of a model of superhuman organisational omniscience in the service of rationality. Instead, there is an inclination to accept the proposition that organisations frequently act on incomplete or incorrect information, and without being aware of their alternatives.

Perrow (1961) suggests that non-rational orientations exist at all levels within complex organisations, including at the very level which purports to set the goals and assesses the degree to which they have been attained. Choices, according to March (1984, p 92) are often made without regard for preferences. Human decision makers routinely ignore their own preferences in making decisions: they follow hunches, rules, traditions, and the advice or actions of others. Human beings seem to recognise in their behaviour that there are limits to personal and institutional integration in tastes and preferences (March, 1984, p 93).

The Post-rational View - A Different Kind of Organisation

Post-rational perspectives on organisations perceive organisational participants as problem solvers and decision makers, but assume that individuals find themselves in a more complex, less stable, and less understood world than that described by standard theories of organisational choice (March and Olsen, 1976, p 21). The emphasis in the post-rational perspective is on accounts of organisational behaviour that are real (March and Olsen, 1979, p 21).

Many organisations, especially human service organisations (Elmore, 1978), and schools (Firestone, 1980), have multiple and vaguely defined goals and uncertain and non-standardised technology (Metz, 1984, p 2). Participation by organisation members is also fluid (Cohen and March, 1974). These organisations, in Bolman and Deal's (1985, p 150) view, function like complex, constantly

changing, elastic pinball machines, and March and Romelaer (1979, p 276) have described decision making in them as a game in which the organisation is likened to a round, sloped, multi-goal soccer field on which individuals play soccer. Many different people, but not everyone, can join in the game or leave it at different times. Some people can throw balls into the game or remove them. Individuals while they are in the game try to kick whatever ball comes near them in the direction of goals they like, and away from goals they wish to avoid. The slope of the field produces a bias in how the balls fall and what goals are reached, but the course of a specific decision and the actual outcomes are not easily anticipated.

Organised anarchies

Cohen et al. (1972, p 1) describe such organisations as organised anarchies, whose decision making processes are characterised by disorder. While organised anarchy may imply no order at all, March (1984, p 95) says that there is order in such organisations, it is just not conventional order. The ways in which these organisations bring order to disorder is less hierarchical and less a collection of means-end chains than is anticipated by conventional theories (March, 1984, p 95). Pfeffer (1982, p 9) notes that this conception of organisations stresses the sequential unfolding nature of activity in them. Because participation in organisational decisions is segmented and discontinuous, because preferences develop and change over time, and because the interpretation of the result of actions is often problematic, behaviour cannot be predicted beforehand either from the intention of individual actors or from the conditions of the environment. Rather, organisations are viewed as contexts in which people, problems and solutions come together with the results determined importantly by the process and by the constraints on that process.

Rationality cannot guide action in this view, because rationality, goals and preferences are viewed as emerging from the action rather than guiding the action. Furthermore, there are too many different parties involved with fluid participation to predict resulting actions even if preferences could be specified. Moreover, knowledge of external constraints and forces is insufficient to predict action because of the ambiguities and uncertainties involved in registering these external demands within the organisation, and incorporating them in language and meanings shared by the various organisational actors.

Of the various post-rational perspectives on organisations which have evolved in reaction to the inability of the rational models adequately to account for observed behaviour in organisations, the organised anarchy perspective was selected for the present context, chiefly because it had previously been applied to educational organisations (March and Olsen, 1976; March and Olsen, 1979). Moreover, a model of decision making had been developed within the framework of the organised anarchy perspective which purported to describe decision making in organisations possessing the characteristics of organised anarchies. The model of decision making had also been especially devised to describe decision making in educational organisations (Estler, 1988, p 312).

The next section outlines the characteristics of organised anarchies as they are reflected in schools.

Schools as Organised Anarchies

In developing their organised anarchy perspective, March and Olsen (1976, p 9) noted that many of the things they observed seemed to be understood badly by ways of thinking about organisations then current. Their objective in

developing the organised anarchy perspective was to talk differently about organisational decision making, with a view to making sense of behaviours and processes which were unexplained or simply unidentified by other models. Thus while the classical, rational administrator acts on the basis of knowledge about objectives, technology, and past experience of the organisation, in educational organisations all three are ambiguous (March, 1978b, pp 228-9). Specification of objectives is rarely precise enough to be administratively useful. Even when goals are clear, lack of knowledge about the technology of schooling complicates their implementation. Experience too is ambiguous, because the past experience of the organisation is difficult to interpret. What happened is obscure. Why it happened or whether it had to happen is obscure. Learning from experience depends on clear interpretation of that experience, and despite Fletcher's (1986) advocating the application of the historian's skills to the context of educational decision making, it is uncertain whether school governing bodies consciously have recourse to precedent in addressing current issues and problems. Any capacity for rational decision making is thus undermined by the ambiguities present in educational administration (March, 1978b, p 236; Lortie, 1973, p 11).

Organised anarchy thus is characterised by three general properties: problematic preferences, unclear technology, and fluid participation of organisation members (Cohen et al., 1972, p 1).

Characteristics of organised anarchy

(i) Problematic preferences

Many organisations are characterised by inconsistent and ill-defined objectives, and it is often impossible to specify a preference function for an organisation which satisfies both the consistency requirements of theories of choice and the empirical requirements of describing organisational motive (March and Olsen, 1979, p 12). This ambiguity of intention in an organised anarchy means that its preferences are problematic, and its goals tend to be ambiguously defined. They shift over time, and are stated in terms which are hard to translate into action. As a result, the decision process reflects more a series of actions by which goals are discovered than a process by which they are acted upon (Cohen et al., 1972, p 1; March, 1974, p 24). Clark and McKibbin (1982, p 670) certainly suggest that schools in particular more often discover their goals as a result of what they have done, rather than by actually planning what to achieve and how to achieve it, and Baldrige et al.'s (1978) study of policy making in universities and colleges showed that their goals are ambiguous and diverse. Noting that universities and colleges served clients rather than processing materials, Baldrige et al. (1977, p 4) observe that an organisational goal of serving clients is difficult to define and the results are hard to evaluate.

While McCarty and Reyes (1987, p 7) argue that where an educational institution does have clearly defined goals, as in the case of their study of a prominent research institution, the organised anarchy model is perceived to be less appropriate to describe its operations, Weiner (1979, p 247) points out that traditional models of organisational choice fail to describe the processes within other educational institutions such as schools and universities because operational criteria for a good decision either do not exist, or are not widely shared among participants in the decision making process. Data essential even to a rudimentary understanding of the impact of various decision alternatives is often missing or garbled, and the definition of the problems to be solved is not stable (Weiner, 1979, p 247).

Sproull, Weiner and Wolf (1978, p 5) certainly found in their major study of the Institute for Educational Research that there was little agreement among members of the organisation on the definition of its goals.

(ii) Unclear technology

The second property Cohen et al. (1972, p 1) identify in organisational anarchies, unclear technology, signifies the fact that the organisation survives and manages to produce, but its processes are not well understood by its members (Owens, 1987, p 25). There is only a low probability in the classroom of the classroom teacher being able to identify or develop courses of action which have a specifically intended impact on a previously identified problem (Sproull et al. 1978, p 5), while Baldrige et al. (1977, p 4) point out that in academic institutions, employees are typically highly professionalised, but their technologies are unclear because they are based on professional skills. Each academic has a wide range of professional responsibilities in many areas, rather than one repeated job like an unskilled worker on an assembly line. Operating procedures are thus not standardised and there is little specialisation (Abramowitz and Stackhouse, 1980), with the result that it is not clear how the processes of teaching result in learning. This uncertainty about how schools produce learning makes the technology of the teaching-learning process ambiguous and unclear.

Uncertainty about how schools produce learning leads to much of the ambiguity and complexity that complicate the decision making process in educational institutions too, and the likelihood of a particular decision maker's being able to be certain that a particular action will yield an intended outcome is similarly low. Duignan (1987b, p 45) notes that the processes of administration in educational institutions are not clearly understood by those who are involved.

(iii) Fluid participation

Boyan (1982) regards the fluid participation of organisational members as the central tenet of organised anarchy. People both inside and outside the organisation are perceived to have limited resources of time and energy, and their attention to particular issues within the organisation is thus neither continuous nor stable (Sproull et al. 1978, p 5). March (1989, p 3) argues that one of the oldest speculations about decision making in organisations is that time and attention are scarce resources. Organisation members vary in the amount of time they are willing to expend on organisational decision making, and constantly face the problem of allocating attention among competitive claims on their time (March and Olsen, 1979, p 51). Recognising that participants also play other roles as members of families, neighbourhoods, friendship groups, and communities, organisational tasks potentially consume more time than many participants have. In a school, for example, teachers have norms of autonomy and professionalism which give them some discretion on how much they are willing to do in regard to given issues (Hanson, 1985, p 163), and administrators and decision makers similarly have obligations responsibilities outside their organisational roles.

Because of the demands on their time, March and Olsen (1979, p 50) note that allocation of attention by organisation members tends to give priority to those things that are immediate, specific, operational and do-able, and some things rarely secure attention unless there is nothing else to do. The character and outcome of any decision process in an organisation is thus heavily dependent on

the other demands on the time of different participants, including both extraneous outside demands, and irrelevant internal demands.

March and Olsen (1979, p 51) note that while it is convenient to think of attention as a flow of energy from an autonomous participant to an autonomous choice, attention is actually organised in more complicated ways. An individual cannot allocate attention to a meeting, for example, unless a meeting exists, and the meeting does not exist unless other participants are also there, having allocated time to be present. One person's time allocation is thus a factor in another person's allocation. Another related factor is the importance of considering the participant who is not there. The price of absence, in terms of allocation of time, is the attention that is paid to concerns of the absentees and to anticipation of their reactions (March and Olsen, 1979, p 51).

March and Olsen (1979, p 22) stress that their notion of participation in an organisation is broad. They consider it refers to activities as diverse as attending meetings, seeking information, discussing, and voting, as well as making speeches, proselytising, seeking office and campaigning, but without regard to the motivation for or the effect of the activities. The central criterion for participation is simply presence or attendance (March and Olsen, 1979, p 23), and Boyan (1982) explains that decision outcomes therefore crucially depend on the amount of time and the intensity of the attention paid by participants in bringing preferred programmes to the agenda table and securing favoured outcomes. They depend heavily on other decisions and other concerns for participants that are currently activated (Olsen, 1979, p 84).

Having discussed the characteristics of organised anarchies, the next section of this paper reviews applications of the organised anarchy perspective. March (1974, p 24) asserts that educational institutions are organised anarchies, and previous research generally has indicated that the organised anarchy perspective is well suited to describe organisational behaviour in educational institutions.

Applications of the Organised Anarchy Perspective to Schools

Cohen et al.'s (1972, p 11) claim that the organised anarchy perspective is applicable to a university is supported by Griffiths (1977), and it has also been applied to the understanding of schools as organisations (Willower, 1979, p 36; 1982, p 90; 1986; Duignan, 1989, p 134). Firestone and Herriott (1981) found that secondary schools in particular resembled organised anarchies, and were characterised by diverse goals and loose coupling among their components.

Schools do have goals which are usually abstract, ambiguous, and quite diverse. Measuring goal attainments, and the consequent difficulty of relating outcomes to organisational inputs, confound efforts to measure organisational success (Willower, 1982, p 91). Schools also lack a widely accepted work technology (Willower, 1982, p 90). While teaching is the school's core technology, there is no dominant set of technological processes, and no one best way of teaching (Duignan, 1989, p 134). Moreover, while teaching is surrounded by trappings of standardisation, such as syllabi, materials and schedules, it is not in itself a standardised activity (Baldrige et al., 1977, p 4; Willower, 1982, p 91), and it is thus not possible, in more than rather general ways, to specify the impact of educational technology on learners (Owens, 1987, p 24) because there are no clear links between what the school does and what it produces (Meyer and Rowan, 1977). Moreover, knowledge of human cognition is sufficiently limited to make

ambiguous any attempt to attribute processes producing those outcomes to schooling (Meyer and Rowan, 1977, p 359).

Schools also exemplify fluid participation by organisation members (Davis and Stackhouse, 1986). Willower (1982, p 102) regards the activity of school administrators as more or less fitting the garbage can picture of a fluid mixture of problems, participants and solutions in anarchic circumstances. He suggests that administrative life in schools is consistent with a conception of reality which is somewhat chaotic, being fast-paced and varied, with many brief, fragmented often interrupted episodes (Willower, 1981, p 125). This limits the opportunity for decision makers to participate in decision making in a controlled, predictable way, as other competing demands on their attention and time intrude.

The usefulness of the organised anarchy perspective as a conceptualisation is certainly accepted by Padgett (1980), and Pinfield (1986), whose findings support Estler (1988, p 314) in her assessment of the organised anarchy perspective as providing a picture which captures the contextual realities of organisational decision processes, which in themselves are characterised by ambiguous goals, by unclear technology, and by fluid participation. As a result, the organised anarchy perspective enables practitioners to look at a given decision context with a more realistic perception of what the task involves, using a framework within which they might understand what they are doing.

Willower (1981, p 125) notes that the organised anarchy perspective has also guided a number of case studies of universities and schools, citing only March and Olsen's (1976) collection of case studies. What is significant in these studies is that not only is the organisation seen to operate in a context in which the characteristics of organised anarchy are present: the decision makers themselves are observed to confront ambiguous goals. Moreover, their understanding of the technology involved in the process of their decision making is limited, and the nature of their individual participation in organisational decision making is fluid.

It is clear in these studies using the organised anarchy perspective (March and Olsen, 1976; March and Olsen, 1979) regarded the organisation and the participants in decision making as being synonymous: the organised anarchy perspective described the context in which decision making was carried out, and also described the specific decision making context in which decisions were being made.

The Garbage Can Model of Decision Making

Artifactual, or non-decision models of decision making then, evolved as a reaction to the inability of rational and conflict resolution models of organisational decision making to describe decision making in organisational contexts featuring ill-defined goals, unclear technologies, and fluid participation. Olsen (1979, p 85) regards artifactual models as being particularly appropriate in organisational circumstances in which the participation of organisational members is continuously changing, in which definition of values, beliefs and procedures is complex so that the situation is difficult to analyse, and in which it is difficult to identify and compare the consequences of the existing alternatives. The artifactual model moves beyond rational assumptions of goal-based decision making to develop a contextual model of choice.

Cohen and his colleagues have developed a model of decision making within organised anarchy called the garbage can model (Cohen et al., 1972; Cohen and March 1974; March and Olsen, 1976; March and Olsen, 1979). Estler (1988, p 312) notes that this model was developed specifically to focus on decision making in educational organisations, and goes on to explain that in comparison with the

rational model, the garbage can model is not neat or simple, but it does provide a picture that captures the contextual realities of organisational decision making (Estler, 1988, p 314).

It is the application of the organised anarchy perspective and the garbage can model to the investigation of the decision making process to which this paper now turns. The next section sets out the properties of the garbage can model and its description of decision making in organisations possessing the characteristics of organised anarchies, before showing how the model was used to provide a framework for the investigation of decision making in the governing body of an Australian private school.

If the garbage can model is to provide a useful and useable alternative to the rational model for educational administrators, it will need to be shown to have application in the context of decision making in a real-world educational context.

Features of the Garbage Can Model of Decision Making

The account of the process of decision making offered by the rational model is a poor description of what actually happens in organisations such as schools. In such organisations, which are series of loose connections among a large number of changing elements, decision opportunities are fundamentally ambiguous, and decisions are only partially explained as outcomes determined by rational intentions (Cohen et al., 1972, p 2). Organisational decision making involves a complex interplay among the generation of problems in the organisation, the deployment of personnel, the production of solutions and the opportunities for choice.

The search for solutions to problems in organisations is not necessarily contingent upon the identification of a problem. Solutions may exist independent of problems, and problems may be created in order to provide opportunities for the application of previously discovered solutions. Participants both inside and outside the organisation vary in the amount of time and attention they can devote to individual decisions. At any time, the definitions of both problems and solutions are at least partially dependent upon the mix of participants in the process (Sproull et al, 1978, p 5).

From this point of view, therefore, an organisation becomes a collection of choices looking for problems; issues and feelings looking for decision situations in which they might be aired, solutions looking for issues to which they may be an answer, and decision makers looking for work (Olsen, 1979, p 85). Conceived thus, the appropriateness of perceiving the organisation as the particular decision making group (Christensen, 1979) is clear.

Within such an organisation a choice opportunity can be seen as a metaphorical garbage can into which various kinds of problems and solutions are dumped by participants as they are generated. Choice opportunities of three kinds occur in organisations (Christensen, 1976, p 373). Routinely held events such as meetings provide opportunities for participants to dump their problems and solutions in the garbage can. Then, external events such as a resignation can trigger opportunities for problems and solutions to be aired, and a growing awareness that something needs to be done about a particular problem can also create an opportunity for choice.

Decision Making in a Garbage Can

In the garbage can model, a decision is the product of the confluence at a given time of exogenous, relatively independent streams of choice opportunities,

problems, solutions, and participants. Problems and solutions are attached to choices and thus to each other, not because of their inherent connection in a means-end sense, but as a result of their temporal proximity. A decision is made because a particular solution and a particular problem floating around in the garbage can find a participant who has the time and energy to choose to link them (Hanson, 1985, p 164). The collection of decision makers, problems and solutions that come to be associated with a particular choice opportunity is orderly, but the logic of ordering is temporal, rather than hierarchical or consequential. At the limit, for example, any solution can be associated with any problem, provided they are contemporaneous (March, 1984, p 95).

In order for a decision to be made there must exist the occasion for a decision. Choice opportunities are occasions on which the organisation is called upon to produce behaviour which can be called a decision, such as the signing of a contract, hiring and firing, approval of budgets, and allocation of responsibilities.

Problems are the concerns of people inside and outside the organisation, and include non-choice related issues such as family problems, career and status, interpersonal conflicts and ideology. Solutions are somebody's product, or are answers looking for questions. It is not impossible to have the answer before the appropriate question is known. Participants are able to participate in decision making subject to other demands on their time, and variation in participation also depends on rights of participation determined by organisational structure, norms, interest and duty (Estler, 1988, p 312).

The choice process in the garbage can model thus is one in which problems, solutions and participants constantly move from one choice opportunity to another. The nature of the choice, the time it takes, and the problems it solves all depend on the mix of available choices, the mix of problems which have access to the organisation, the mix of solutions looking for problems, and the competing demands on decision makers at a specific time (Estler, 1988, p 312).

Properties of Garbage Can Decision Processes

The garbage can model is actually a computer simulation of decision making processes, and while they acknowledge that no real system can be totally conceptualised in this way (Cohen et al., 1972, p 12), Cohen et al. (1972, p 9) suggest that their evidence identifies a number of major properties of garbage can decision processes which can be compared with the observed decision making process in the organisation under investigation.

Cohen et al. (1972, p 9) suggest that their evidence identifies a number of major properties of garbage can decision processes. March and Olsen (1979, pp 34-35) list these major properties of garbage can decision making processes: Flight and oversight are the most common decision styles used in the simulation, and resolution is dependent upon the importance of the problem and the time it entered the decision making process. Important choices are less likely to resolve problems than unimportant ones, and choice failure is most common amongst the most important and least important choices. Decision makers and problems track each other through different choices. The decision making process is sensitive to load, and is interactive, as decision making performance varies according to elements of organisational structure.

While the simulated decision making process does not ensure that every problem finds a solution, Cohen et al. (1972, p 16) conclude that the garbage can model does describe the decision making process in organised anarchy, and the outcomes of the simulated process show that choices can be made and problems solved even when the organisation is plagued with ambiguity and conflict and

confronts poorly understood problems. Moreover, it enables the process of decision making in these kinds of organisations to be understood, because it places in the hands of the administrator information about his organisation's likely response to different circumstances it may encounter in dealing with problems of choice.

Research Using the Garbage Can Model

So, did the garbage can model offer the investigator anything of value as an alternative to the rational model? Did it offer a description of the decision making process which the case study observed?

The paucity of previous research on educational decision making in Australia and in equivalent school systems elsewhere commended an exploratory approach in this study, which involved a systematic investigation of educational decision making in the governing body of an Australian private school, grounding its observations in a theoretical model of the decision making process against the background of established organisation theory. The garbage can model itself, as has been noted, is one derived specifically to describe decision making in educational institutions, and one which is regarded by its proponents as being suited to application through case study methodology.

Olsen (1979, p 134) for example suggests that studies of organisational decision making demand an approach which is consistent with the process being described, and compatible with the theory of organisational choice underpinning the investigation. He argues that case study methods offer access to the decision making process in such a way that the garbage can perspective is able to capture a significant proportion of the process involved, and Metz (1984, p 2) agrees, suggesting that decision making behaviour is most easily discovered and explored with methods which involve observation and open-ended interviews which elicit descriptions of events. The theory of organisational choice in which the organisation is seen as a meeting place for streams of problems, solutions, participants and choice opportunities is not only consistent with the historical record provided by a case study, but a case study also has the potential to describe the decision making process in an organisation with ambiguous goals, unclear technologies and fluid participation (Olsen, 1979, p 134).

A participant observation case study of the Council of Wesley College, Perth was carried out by the author (Kefford, 1990), involving the observation of the decision making process in meetings of the Council and its sub-committees for a period of one year. Observation was triangulated by content analyses of the official record in the Minutes of meetings, and also through extensive interviews with governing body members.

The study showed that the organised anarchy perspective identified characteristics of Wesley College Council, providing a means of conceptualising its organisational context. Within that context, the garbage can model proved well able to describe organisational decision making processes.

WHAT THE RESEARCH FOUND

The major findings of the case study were:

The garbage can model of decision making can be applied to the description of the decision making process in Wesley College Council, which displays the characteristics of an organised anarchy, with ambiguous goals, unclear technology and fluid participation. As goals, the College Constitution sets out three Objects for the College, focusing on provision of a certain kind of education, on the provision of scholarships and bursaries, and on carrying out business operations, none of

which is capable of unambiguous definition. Council has also recently set out Aims for the school, dealing with the development of young people, the fostering of their faith and a sense of community, and encouraging their pursuit of excellence. These aims too are incapable of unambiguous definition. Aspects of the Council's approach to decision making reflect its problematic preferences, and its tendency from time to time to clarify its preferences through action.

Wesley Council members were unclear as to how the Council worked, and at least one was unsure what Council's job actually was. Members' participation was also fluid. If defined as presence or attendance, Council members' participation was not continuous, and other demands on their time clearly influenced their capacity to participate in Wesley Council's decision making.

The organised anarchy perspective thus identified characteristics of Wesley College Council, providing a means of conceptualising its organisational context. Within that context, the garbage can model proved well able to describe organisational decision making processes: the decision making process of Wesley College Council can be conceptualised as a confluence of streams of problems, solutions, participants and choice opportunities. Its decision making behaviour resembled the performance of a simulated organisation (Cohen et al., 1972) with the following characteristics:

light load, indicating that participants in the decision making process perceived that they had both energy and time to make the choices confronting them;

segmented access structure, indicating that the range of possible choices in a given situation was limited;

unsegmented decision structure, indicating that each participant was able to participate in the making of any decision; and

equal distribution of energy among organisation members, indicating that each participant contributed time to the making of decisions.

Wesley Council also appeared to function in conditions of *reduced slack*, implying that the external resources available to the organisation were limited, resulting in a relatively high level of decision maker participation.

Wesley Council's decision making performance resulted in the majority of decisions being made by *resolution*, though problem activity, problem latency and decision maker activity were relatively high, and decision time relatively long. A characteristic of the decision making process was that decision makers and problems tracked each other through a variety of different contexts, as long-term problems escaped successive attempts at resolution.

About a quarter of Wesley Council's decisions were made by *flight* (15%) or by *oversight* (9%), decision styles which do not solve problems immediately, but which are steps on the way to eventual resolution. *Flight* occurs when choices are associated with problems unsuccessfully for a time until a choice more "attractive" to the problems comes along. The problems leave the choice, and thus it becomes possible to make the decision. The decision resolves no problems, because the problems have now attached themselves to a new choice. In other words, a flight decision is made when a long-standing problem leaves a choice for a more attractive choice, allowing a decision to be made which does not solve that problem.

An example of an issue which Council did not resolve concerned the impact of the Commonwealth Government's Higher Education Contribution Scheme (Graduate Tax) on staff professional development. In a Report to Council, the Principal had referred to the government's intention to subsidise 4000 tertiary post-graduate places Australia wide for teachers, and at the next meeting he recommended that Council underwrite the cost of higher education for Wesley

teachers. Such a decision would have been in accordance with the Council's Staff Affairs Committee's recommendation that the cost of staff members' further study be met by the school.

Council perceived a number of problems in association with the choice to fund staff higher education costs, some of which were spelled out by Council members at a later Finance Committee meeting. Equity considerations dominated, but there was also concern about staff members taking the money and then leaving, a complicated prospect when the impact of the funding was on a future tax liability. Tax implications were not well understood by members, and again the perennial concern in dealing with industrial relations matters was present - Council was concerned about what other schools may think.

The easier choice for Council at that time was to do nothing, and further discussion on the matter was deferred. Deferment was the fate of the matter again at the next meeting of Council while two sub-committees of the Finance Committee completed their reviews of the situation. Eventually the Finance Committee recommended to Council that HECS not be paid for members of staff, but that they become eligible for advancement an additional increment on their respective salary scale, or to receive other incentives as recognition. Council duly accepted the recommendation.

Oversight occurs as a decision style if a choice is activated when problems are attached to other choices, and if there is energy available to make a new choice quickly. An oversight decision is made without any attention to existing problems, and with a minimum of time and energy being expended. In some ways, the most outstanding example of an oversight decision made during 1988 was the Council Executive's decision to ask the Synod to investigate with all possible vigour the establishment of another Uniting Church School in the southern suburbs of Perth. Having just decided that Wesley could not be relocated, Executive obviously felt something needed to be seen to be done, as much of the discussion in the meeting showed. The decision not to relocate solved none of Wesley's problems. Pressing the Synod for the establishment of a new school would not either, and in fact could create even more problems into the future with competition for enrolments in the area. The choice for such a decision was not new, and had been discussed earlier in the meeting by several members. The wording of the decision expressing the oversight decision was not discussed, and the matter was decided in less than a minute. An oversight decision had been made without any real attention being paid to existing problems, and with a minimum of time and energy expended by Council members.

The relatively large number of flight and oversight decisions indicated that Council made decisions which did not necessarily solve the problems confronting the organisation at a particular time. Typically, decisions by flight and oversight related to issues of school policy, staff management and curriculum, issues defined as important in terms of their impact on the school budget and their relative irreversibility. Confronting such decisions, Wesley Council sought more time to decide, and more information to guide its decision, either from the Principal or from expert consultants. It also sought more opportunity to discuss issues both informally and with other members of the governing body. Given more time for discussion and decision, as well as additional information, a substantial number of decisions initially made by flight and oversight subsequently resulted in resolution.

Participants perceived as important in the decision making process included both of the school's professional administrators, but neither was seen to have influence beyond what was expected by virtue of his office and recognised information-giving role. The Chairman of the Council, another participant defined as important because of his position, was not seen to exert influence on the

decision making process, though he was acknowledged to be an excellent Chairman.

No other individuals were perceived to dominate the decision making process, although most members were perceived by others as having some influence, and felt that they had a contribution to make. Council strove for consensus, and rarely made compromise majority-vote decisions. The three interest groups formally represented on the Council (the Church, former students, and parents) were not perceived to function as interest groups in their influence on decision making. Such a pattern was typical of a decision making group designated as unipolar, (Newman and Brown, 1988, p 3), characterised by a clear sense of common purpose.

In the light of these findings, the purpose of this section of the paper is to draw conclusions from the investigation, including the usefulness and appropriateness of the garbage can model as a description of the decision making process in the governing body of an independent school; and some reflections on decision making within the governing body of an independent school.

THE USEFULNESS OF THE GARBAGE CAN MODEL AS A DESCRIPTION OF ORGANISATIONAL DECISION MAKING

The usefulness of a theoretical model fundamentally depends on its capability to describe what is observed. In her assessment of the garbage can model, Estler (1988, p 314) considers that the garbage can model does provide a picture which captures the everyday contextual realities of educational decision making.

Describing the Decision Making Process

The particular strength of the garbage can model is that it provides a language for talking about observed decision making in an organisational context characterised by goal ambiguity, by a poorly understood decision making process, and by decision makers who have other things on their minds. As Cohen et al. (1972, p 16) acknowledge, such an organisation is not necessarily unsuccessful: it simply does not conform to patterns of organisational functioning derived from other theoretical positions.

In the decision making context of the governing body of an Australian private school, the garbage can model was able to describe the decision making process as it was observed. Wesley Council participated in a decision making process involving four confluent streams, of participants who brought solutions within the limitations of the time they had available, and problems which were issues of concern to them. Choice opportunities were encountered in formal meeting situations, and in the seemingly chaotic way decisions are made, solutions were matched with problems as choices were made (Cohen et al., 1972, p 16).

Close monitoring of the decision making process as it occurred identified dominant decision styles, and all the decisions recorded were able to be classified according to the garbage can terminology. Resolution was the outcome of the majority of the decisions made, though Wesley Council was content to make decisions by flight and oversight, turning its back on difficult decisions in the formulation of school policy, or complex personnel management issues which involved relatively significant expenditure, while it sought more information or simply more time to discuss matters more fully. Measured against a conventional normative model of rational choice, for a group whose function it is to make decisions, that a quarter of the decisions did not solve problems facing the

group, but resulted in flight, or running away, or in oversight, filing issues in a "too-hard" basket, does appear pathological. The capability of the garbage can model to embrace decisions identified by flight and oversight within its theoretical framework as legitimate decision styles, however, rather than as being dysfunctional in some way, undergirds the usefulness of the model, because it provides an explanation for observed organisational behaviour (Cohen et al., 1972, p 16).

Wesley Council members encountered the same problem on different occasions, as choices tracked decision makers. The usefulness of this notion is that it forewarns decision makers that unresolved problems will tend to recur in different contexts, while at the same time reassuring them that in time, unresolved problems do attract solutions. While problems remain current, and decision makers are active, resolution is likely to occur. Again, such insights represent observed reality, and suggest decision management strategies.

The garbage can model also described decision outcomes for an organisation displaying particular characteristics in its load, in its decision and access structures and in its energy distribution, which predicted accurately Wesley Council's decision making behaviour. The predicted decision outcomes matched those expected from an organisation with segmented access structure and unsegmented decision structure. Moreover, its relatively light load and its equal energy distribution among participants contributed towards the high level of resolution decisions observed.

Cohen et al.'s (1972, p 7) discussion of the participation of arbitrarily designated "important" decision makers explicated dimensions of influence on governing body decision making by participants in the process. This further demonstrated the descriptive power of the model to deal with a number of aspects of the decision making process in the governing body of an independent school.

In its decision making performance, Wesley College resembled what Cohen et al. (1972, p 14) describe as a *large rich university*, especially in conditions which simulated reduced slack for such an institution. Conditions of reduced slack were claimed to be the normal state of affairs for an independent school, given its budgetary and income policy, and the model was able to describe its tendency to make most of its decisions by resolution.

In summary, the garbage can model was found to offer a description of the decision making process as it was observed in the governing body of an Australian private school. It demonstrated its capacity to deal with the ambiguities of the decision context by conceptualising them as preconditions determining organised anarchy, and then proceeded to deal with the decision making process as a dynamic interaction between problems, solutions, choices and participants, yielding decision outcomes dependent upon load, organisational structure, decision maker participation, and decision importance.

Reflections on Educational Decision Making

Sergiovanni (1984, p 284) suggests that one concern of research in educational administration is to inform practice. The final section of this paper indicates how this study enhanced understanding of the process of decision making in the governing body of an Australian private school by providing a framework within which practising administrators might understand what they are already doing to respond to complexity, enabling them to administer schools with a more realistic sense of their ability to guide and influence educational decision making.

The particular strength of the garbage can model is that it provides a language for talking about observed decision making in an organisational context which reflects the characteristics of an organised anarchy: goal ambiguity, a poorly understood decision making process, and decision makers who have other things on their minds. Unclear goals, unclear technology and fluid participation are characteristics of an organisational environment with which the Principal is especially familiar, but they can present a daunting prospect to decision makers who are not educators. Council's goals are ambiguous, and while painstaking care might have gone into the production of a detailed statement of objects for the Constitution, and of aims for the school's prospectus, precise definition of those aims and objects is elusive.

What is important is that the organisation's goals be clearly articulated, and developed as the result of a process of careful and deliberate participation, so that even if they are incapable of unambiguous definition and measurement, they enjoy a large measure of acceptance from decision makers and organisation members generally as a set of educational goals. A demonstration of objective accountability in regard to those aims, however, is not possible, and nor will governing body members necessarily be able to relate the outcomes of their decisions to those aims and objectives. The environmental reaction to their decisions will not be predictable, and nor will environmental events necessarily reflect a clear relationship with the decisions which are made.

For a governing body chairman, or indeed for any member whose normal daily work sees him active in a business or commercial context, such a state of affairs may be difficult to come to terms with, but if a perception of unclear goals can be linked to the observation that an educational organisation can endure a lack of clarity and yet not be unsuccessful, then the state of affairs may at least prove tolerable.

One implication of unclear goals is that Council members are unclear as to how the Council's decision making process actually works. Members of Wesley Council felt it took three years to become effective, and that out of a ten year maximum term. The school governing body probably cannot afford that luxury - members perhaps need an induction programme, or a training course, along the lines of the one described by Gent and Mahony (1983) for governors of English government schools. After such a course, the technology might still remain unclear, though insights from garbage can processes might help governing body members understand why they are unclear, and moreover, that the lack of clarity need not impede the operations of the governing body nor of the school.

Wesley Council members are clearly very much part-time participants in the organisation, though they feel that their part-time participation is valuable and necessary. With numerous other demands on their time and attention in addition to their governing body work, nonetheless, governing body members cannot participate in making some decisions because they simply cannot be present when they are made, and will not participate in the making of others because not all decisions are salient for them personally. The Chairman may well accept the truth of Clark and McKibbin's (1972, p 672) claim that fluid participation recognises what most chairmen have learned over the years, that decisions are shaped by the members who happen to be present when a choice opportunity arises or when a particular member decides that a decision is or is not salient to him, while members will be reassured that it is not a bad thing to be part-time, because that is how many organisations like this one work.

March and Olsen (1979, p 49) suggest that action in an organisation is driven by routines, and thus the routines of attention allocation adopted by Wesley Council members may tend to give priority to the things that are immediate,

specific, operational, and do-able - they may also tend to ignore things that are distant, general, and difficult to translate into action. Among the latter are long-term planning, thinking, non-familiar problems, and ambiguous objectives, and the Chairman may consider whether time needs to be allocated to these tasks.

Organisations and the people in them deal with the inevitable ambiguity of their situation, in unclear goals and unclear technology, by avoiding it (March and Simon, 1958). Attention allocation is therefore subject to deadlining, and some things rarely receive attention unless there is nothing else to do (March and Olsen, 1979, p 50). In this regard, the chairman might consider imposing deadlines for certain decisions, in order to enable resolution to take place. Decision styles involving unresolved problems, flight and oversight, tend particularly to occur when the governing body is faced with difficult and important decisions, focusing on major expenditure, issues of policy, curriculum and personnel change. More difficult decisions will only be made when they have to be. Sometimes, an enforced deadline enables resolution to occur, as Weiner (1979, p 248) suggests.

What is particularly interesting here is the possibility of integrating the characteristics of garbage can processes and the findings of Newman et al.'s research (Newman, Brown, Rivers and Glock, 1983; Newman, Brown and Rivers, 1987). In the garbage can conceptualisation, the most difficult decisions tend to result in flight and oversight. For Newman et al. the most difficult decisions - the ones dealing with high importance choices (high cost, hard to turn around) - are the ones which will imply the greatest need for information, for opportunity to discuss the decision, and for formal and informal contact with other governing body members. The integration of both approaches yields suggestions for strategies for dealing with important decisions.

The Wesley experience suggests that the prospect of resolution is increased if governing body members have more opportunity to talk about their decisions, have more information, and have expert consultant advice. Perhaps the incidence of non-resolution could be reduced by planning for information provision and consultation on important decisions, so that the governing body was not delaying or avoiding implementation of important decisions by resorting to flight and oversight.

The provision of information and expertise to the governing body is the role of the professional administrators. The Principal needs to recognise the importance of his role as the centre of communication in the school (Baird, 1977, p 74) and as the source of information to the Council. He is aware that there is an increased need for information and for consultation when important issues are before Council, and he is available to provide expert advice for those discussions which require it, or makes expert advice available anticipating Council's needs.

The Principal also needs to know that consensus on any issue is more likely when he provides a range of points of view in a variety of information. March (1987, p 161) suggests that information support systems for decision makers should be designed to provide information in a form familiar and useful to them. March (1987, p 163) notes that it is difficult to devise an information system for an imprecise, changing decision structure, noting that the *ex ante* linkages among the expected uses of information in making decisions, its generation and its actual uses are rather loose. The demand for information from decision makers does not conform with the expectation based upon information being valued solely for its capacity to reduce uncertainties which affect choices (Feldman and March, 1989, p 408). Close articulation of decisions and information is in fact of little use in situations where preferences, causal structures and meanings are unclear and changing (March and Olsen, 1986), and in such contexts, information may have a value other than in its relevance to a decision (Feldman and March, 1989, p 423),

and may provide an instrument of interpretation of organisational purposes (March, 1987, p 165; March and Sevón, 1989, p 437).

The Principal needs to realise that important decisions also require time to discuss issues both formally and informally, and Bisso (1988, p 39) advocates that the Chairman schedule work sessions before meetings so that issues can be canvassed, if only by himself and the professional administrator, to ensure that the relevant information is available to the governing body. In short, the principal needs to ensure that his part-time decision makers are well prepared and well resourced for meetings.

Another insight from the application of the garbage can model into the decision making process of Wesley Council is that the organisation appears to be *lightly loaded* in Cohen et al.'s (1972) terms because it makes most of its decisions by resolution, and provided the load on decision makers remains relatively light, the proportion of decisions resulting in resolution is enhanced. Time to decide is a factor in this (Newman et al., 1983; 1987), and by providing sufficient time for decisions to be made, the advantages enjoyed by lightly-loaded decision making groups can be preserved. Cohen et al. (1972, p 10) suggest that those who manage organisations need to be aware of the access and decision structure within which they appear to be operating, and note the possibility that decision making performance will be a function of how problems and choices enter the organisation, and how participants perceive their access to decision making.

Based on their computer-model simulation, Cohen et al. (1972, p 15) regard the ideal decision making context as being one characterised by light load, unsegmented decision structure and segmented access structure, and one in which important decision makers are relatively heavily loaded, experiencing prolonged reduced slack. Such a context is marked by short decision time, decisions without problems (resolution), and low problem activity. From such situations, administrators retire being remembered for their term of peace and progress. Cohen et al. (1972, p 15) suggest that it is a goal towards which all educational administrators should strive!

Garbage Can Strategies of Decision Management

Garbage can concepts thus do offer insights into the decision making process, and can be used to assist governing body members to observe their own organisation, and understand more about how it operates. They also provide means for discussing aspects of the decision making context in a useful and comprehensible way, and a framework within which the Chairman and the Principal can use their influence to develop strategies to assist decision makers towards resolution of their decision problems.

March (1984) claims that the strategies of decision management which can be derived from this perspective on decision making are not complicated. Firstly, March (1984, p 95) advises the decision making group and the principal to *persevere*. The disorderliness of decision processes and implementation means that there is no essential consistency between what happens at one time or place and what happens at another, or between policies and actions. Decisions happen as a result of a series of loosely connected episodes involving different people in different settings, and they may be unmade or modified by subsequent episodes.

Secondly, March (1984, p 95) says, *have a rich agenda*. There are innumerable ways in which disorderly processes will confound the cleverest behaviour with respect to any one proposal, however important or imaginative. What such processes cannot do is frustrate large numbers of projects.

Thirdly, March (1984, p 95) suggests the decision making-group *provide opportunities for garbage can decisions*. One of the complications in accomplishing things in a disorderly process is the tendency for any particular project to become intertwined with other issues simply by virtue of simultaneity. The appropriate response is to provide irrelevant choice opportunities for problems and issues, for example discussions of long run plans or goals. When many problems, solutions, choices and participants are circulating together, decisions are bound to occur.

Clark and McKibbin (1982, p 672) believe that insights offered by the garbage can model have the advantage of being grounded in the experience of practitioners. From the Principal's point of view, one of the more important insights offered by this study is that it provides further evidence that theoretical positions other than rationality underpin his daily work. Commentators such as Chetcuti (1981, p 83) advocate that Principals of schools regard themselves as businessmen and develop the rational managerial skills required by businessmen, being aware of the value of cost-benefit exercises, and frequently looking at the school as a system of inputs and outputs. Chetcuti's (1981) perspective on administrative action as rational and foresightful suggests that thinking should precede action; that action should serve a purpose, that purpose should be defined in terms of a consistent set of pre-existent goals; and that choice should be based on a consistent theory of the relation between action and its consequences (March, 1979, p 71).

The evidence is overwhelming that most of the time, such a world does not exist for school administrators, as a study such as this one amply demonstrates. At the end of his general review of organisational decision making, March (1984, p 97) notes that the organised anarchy perspective embodies a vision of decision making that embraces the axioms of choice but acknowledges their limitations; that combines a passion for the technology of choice with an appreciation of its complexities and the beauties of its confusions; and that sees a Principal as often being constrained by sensibility and rules, but sometimes bouncing around on a soccer field, the crazy sloping soccer field that is organised anarchy (March and Romelaer, 1979, p 276). The image of a Principal bouncing around on a soccer field is closer to the reality of this Principal's world than Chetcuti's (1981) rational businessman!

CONCLUSION

This study broke new ground in its application of the garbage can model to decision making in the governing body of an Australian private school. The work of Australia's independent schools has not been the subject of much empirical investigation, and for that reason, this study was designed as an exploratory one, intended both to provide a basis for generalisation to other similar educational decision making groups, and also to provide insights into their operation. The demonstrated applicability of the garbage can model to decision making in the governing body of an Australian private school commends its application to the decision making process in other educational organisations to see whether their decision making process can be represented in the same way. The insights gained into the decision making process in this investigation may illuminate the understanding of the decision making process elsewhere.

This paper set out to resolve the dilemma of choosing an appropriate model for educational decision making. The garbage can model is not the only model which could have been applied in the present context to describe decision making, but it does suit the purpose of the organisation member, focusing attention not on

decisions as garbage, but rather on the garbage can as a receptacle of chance concurrences of choices looking for problems, issues and feelings looking for decisions, solutions looking for issues to which they might be the answer, and decision makers looking for work. Inevitably, this conceptualisation runs the risk of overstating the chaotic, almost capricious nature of decision making in school situations, but it also rings true. As Clark and McKibbin (1982, p 672) observe, it sounds so much like the way of the world.

In the final analysis, this is the measure of the appropriateness of the garbage can model. It offers a striking conceptualisation of decision making within an organisation, but what is more important is that to those who work in educational institutions, it offers a representation of organisational reality which is recognisably apt. Candy (1986, p 103) points out the fallacy that there might be a single model which accounts consensually for all that is perceived or experienced, but a model is valid if it reveals an essential aspect or facet in the structure of human reality (Valle and von Eckartsburg, 1981, p xxi). Inevitably there is a difference between the full and rich reality of an organisation and the knowledge participants are able to gain about that organisation. Organisation members can know organisations only through their experience of them (Morgan, 1986, p 341). They use models to make sense of their experience, and to share their understandings.

In this study, the garbage can metaphor has been applied to that end, and also to that end, the next step may be to devise a procedure which enables other decision making groups in educational organisations to apply the garbage can model to their own decision making process, enabling it to identify the properties of the garbage can simulation in their own decision making, to see not whether the garbage can in fact applies, but how it does. If they find for example that resolution is not their dominant decision style, and they have a segmented decision structure, then advice could be offered on how they could increase the number of resolutions in their decision making performance. It would be of value to governing bodies to set out fully the best way to achieve resolution - by aiming to have light load, segmented access structure and unsegmented decision structure, and accepting reduced slack. Certainly it seems important that members be free to participate in every decision - i.e., decision structure is unsegmented - because in independent schools, the segmented access structure (restricted choices) and reduced slack are facts of organisational life more or less determined by outside forces: the only things the Council really has control over are load and decision structure.

Clearly at Wesley College, the decision outcomes depend on the features of the organisational structure. Cohen et al.'s (1972) variety of simulated outcomes from the same garbage can operation results in different behavioural symptoms under different levels of load in the system or different designs of the structure of the organisation. Such differences raise the possibility of further research applying the model to predict variations in decision behaviour when aspects of an organisation's structure are varied systematically, and also in different organisations with different organisational structures (Cohen et al, 1972, p 11). Cohen et al.'s (1972, p 14) simulated universities provide four different patterns of educational decision making which could be used to investigate, as this study has done, the decision making performance of a variety of schools.

The selection of the garbage can model of decision making derived from the organised anarchy perspective on educational institutions for this study reflected a belief that this investigation required a theoretical approach which was specific to the operations and functions of a school. The application of a model derived from more general theories of organisations to schools not only provided an

adequate description of the school governing body's decision making processes, thereby enriching understanding of how an independent school's governing body functions; it also demonstrated the general usefulness of the model in its applicability to an educational context to which it had not previously been applied.

The garbage can model has been demonstrated to be useful in describing the decision making process actually adopted by the governing body of an Australian private school. The organisational anarchy conceptualisation seems well suited to situations where a group of people has to produce behaviour recognisable as a decision in an organisational context which has unclear goals, unclear technology, and fluid participation. The ultimate value of the study will rest in the hands of those who now reflect upon its findings, mindful of the words of William Wordsworth, that it is

Enough, if something from our hands have power
To live, and act, and serve the future hour.

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